AREAS 1-6

Forest Production Management Areas

INTRODUCTION

Within the NH-AL, there are six Forest Production Areas. These Areas include:

AREA 1: Winegar Moraines

AREA 2: Manitowish Peatlands

AREA 3: Vilas Sandy Plains North

AREA 4: Vilas Sandy Plains Central

AREA 5: Big Arbor Vitae Loamy Hills

AREA 6: Oneida Sandy Plains

The management objectives of a forest production area is the sustainable production of timber and other forest products. The objectives for any given management area may vary depending on site capability, timber types, markets, and societal needs. Desired associated benefits, the desired future conditions, adjacent land uses and local economic conditions all influence the objectives.

Examples of timber management activities and techniques include clearcutting, selection harvesting, thinning, and other routine stand improvement activities (i.e., pruning, non-commercial thinning, crop release and the elimination of competing trees, shrubs, vines and grass) Timber stand improvement refers to management practices for the purpose of improving the overall rate of growth. Herbicide application, mowing, burning, and planting in addition to accomplishing the previously mentioned, may also be used to assist with erosion control and road construction (WDNR 2001).

While managing for timber products, ecological attributes that are characteristic of older forests are maintained within forest production areas. Also, in areas of high recreation use and where site conditions allow, timber is managed in a manner that promotes long-term visual appeal (WDNR 2001).
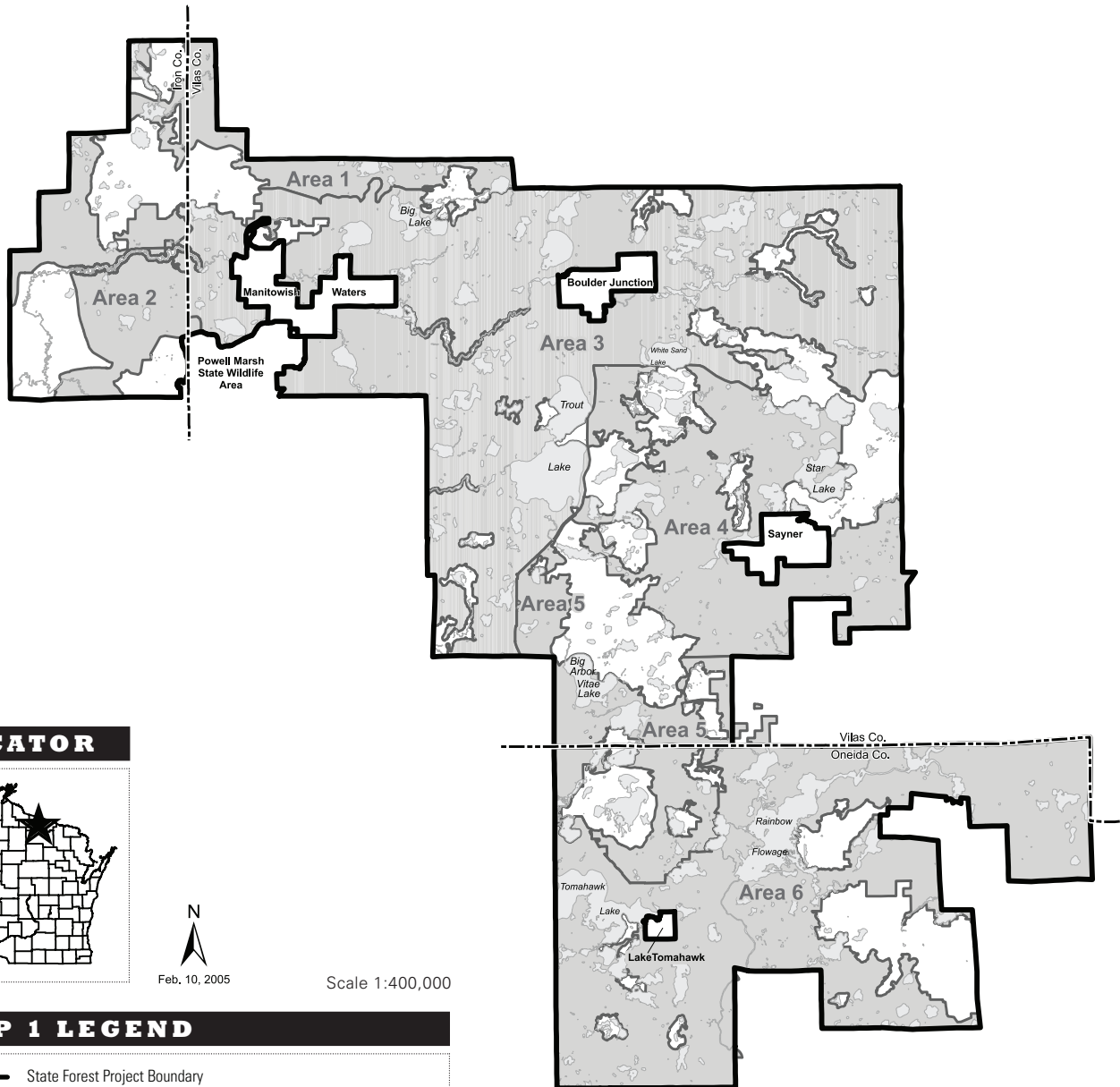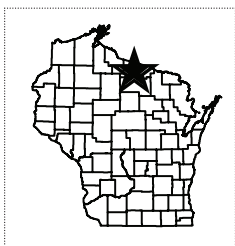
MAP 1: FOREST MANAGEMENT CLASSIFICATION AREAS

Area 1

Big Lake

Boulder Junction

Area 2

Manitowish

Waters

Area 3

White Sand Lake

Powell Marsh State Wildlife Area

Trout

Lake

Star Lake

Area 4

Sayner

Area 5

Big Arbor Vitae Lake

Area 5

Vilas Co.
Oneida Co.

Rainbow Flowage

Tomahawk Lake

Area 6

LakeTomahawk

LOCATOR

N

Feb. 10, 2005

Scale 1:400,000

MAP 1 LEGEND

——— State Forest Project Boundary

Forest Production Management Classification Areas

Area 1. Winegar Moraine
Area 2. Manitowish Peatlands
Area 3. Vilas Sandy Plains North
Area 4. Vilas Sandy Plains Central
Area 5. Big Arbor Vitae Loamy Hills
Area 6. Oneida Sandy Plains

–·–·– County Boundary

Open Water

The data shown on this map have been obtained from various sources, and are of varying age, reliability and resolution. This map is not an authoritative source of information about legal land ownership or public access.

AREA 1

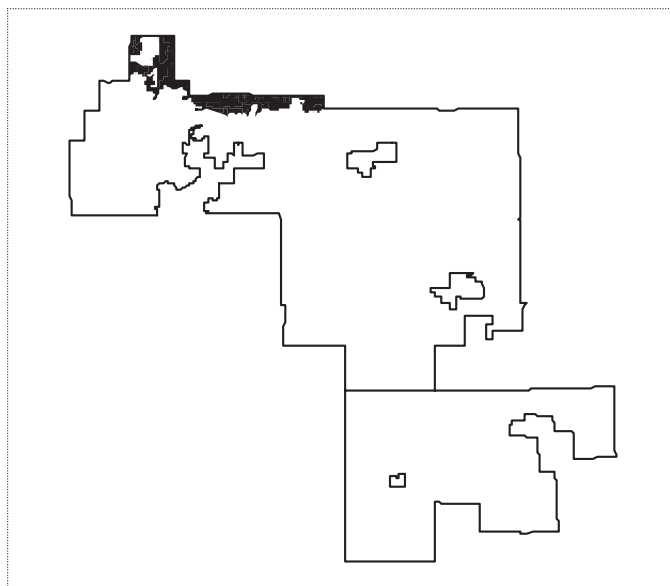## Forest Production Management Areas

WINEGAR MORAINES

The Winegar Moraines Ecological Landscape is located at the northwest "top" of the NH-AL and is considerably more widespread in the proposed northern boundary expansion. Only a small portion of this landscape is currently in state ownership.The predominately loamy soils and hardwood forests of this area are uncommon within the state forest. The topography of the Winegar Moraines is predominantly rolling, with abundant wetlands and many lakes. It is characterized by heavier soils that support northern hardwoods and hemlock-hardwoods with associated herbs such as wild lily-of-the-valley, lady fern, shield fern, grasses and sedges, and big leaf aster, with a poorly developed shrub layer. Soils are mostly well drained sandy loams, silt loams and organic deposits.

At European settlement, the uplands were mostly covered with hemlock/yellow birch, with sugar maple as a secondary species which reflects primarily a disturbance pattern of frequent small blowdowns, infrequent large blowdowns and extremely rare catastrophic fires. The drier sites in the area included white birch and white pine with secondary aspen, red pine, yellow birch and sugar maple which reflects a greater frequency of fire disturbance on these sandy soils. Within the forested wetlands, tamaracks dominated, with black spruce as a secondary component.

Within the current state ownership of this ecological area, the highest quality sites of northern hardwoods and hemlock hard-woods have been proposed as Native Community Management Areas and are described in Area 9 – Hemlock Hardwoods. The remaining state forest land in this management area is more fragmented by private ownership and is dominated by aspen, poorer quality northern hardwoods and wetlands.

AREA 1 SUMMARY

- ▲ This area is approximately 10,523 acres in size with 4,918 acres in state ownership.
- ▲ Most of the northern boundary expansion would be in this ecological type.
- ▲ Opportunity to complement management of northern hardwood and hemlock-hardwood communities in adjacent Hemlock Hardwood Native Community Management Area.
- ▲ Conservation of forested and unforested wetlands that provide habitat for many rare species and help protect water quality.

AREA 1 LOCATOR MAP

Map 2. Area 1-Winegar Moraines

Forest Production Management Classification

Legend:
— State Forest Project Boundary
Area 1. Winegar Moraines
Forest Production Management
Other State Forest Management Areas
Private Land within State Forest Project Boundary
Land outside State Forest Project Boundary
Open Water

State Forest Project Boundary

Round L
Unnamed (Wild Lake) L
(Scenic Lake)
Maple Lake
K
Unnamed (Wild Lake)
Big Lake
Papoose L
Clear Lake
P
Toy Lake (Wilderness Lake)
J
Manitowish Waters
Rest Lake
51
K
Circle Lily L
W
VILAS CO.
IRON CO.
Cedar L
North Bass
(Wild Lakes)
DuPage Lake
J
Norway Pine Lake
Woodson Lake
Kelly Lake
(Wilderness Lakes)
Brush Lake

State Forest Project Boundary

N

Feb. 24, 2005

The data shown on this map have been obtained from various sources, and are of varying age, reliability and resolution. This map is not an authoritative source of information about legal land ownership or public access.

0   1   2   3 Miles

Scale 1:100,000

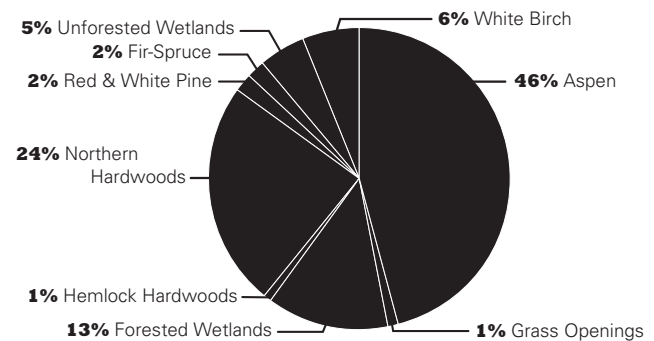Northern Highland - American Legion State Forest

Master Plan

NHAL096-1

AREA 1

Forest Production Management Areas

WINEGAR MORAINES

LONG-TERM OBJECTIVES (100 YEARS)

- Maintain and enhance existing stands of northern hardwoods to increase age diversity and to maintain stand health and vigor.
- Manage at a landscape level considering how these lands can compliment the objectives in the adjacent Hemlock Hardwood Native Community Management Areas.
- Maintain areas of early successional forest (aspen, white birch) in mixed forest stands.
- Maintain diversity of forested and unforested wetlands.

SHORT-TERM OBJECTIVES (50 YEARS)

- Develop a diversity of ages and stand sizes for aspen, white birch and northern hardwoods.
- Retain and encourage yellow birch, white pine and hardwood components on aspen dominated sites. Some harvesting of these species is permitted to meet stand goals.
- Maintaining diversity of forested and unforested wetlands. Some black spruce and tamarack stands would be regenerated through active management. Priorities are in biologically mature stands on productive sites that can be regenerated by recommendations outlined in the General Management Prescriptions section.
- Manage a small reduction of aspen acreage to northern hardwood stands.
- Increase northern hardwoods with active management from aspen, white birch and fir-spruce cover types. Manage these stands for multiple age classes, tree sizes and a diversity of tree species.
- Encourage white pines, red pine components in natural stands and manage plantations for biological maturity.
- Maintain hemlock-hardwood stands at existing levels and encourage scattered hemlock in all stands.

AREA 1 CURRENT LAND COVER

- **5%** Unforested Wetlands
- **2%** Fir-Spruce
- **2%** Red & White Pine
- **24%** Northern Hardwoods
- **1%** Hemlock Hardwoods
- **13%** Forested Wetlands
- **6%** White Birch
- **46%** Aspen
- **1%** Grass Openings

RESOURCE MANAGEMENT PRESCRIPTIONS

Please see the General Management Prescriptions at the beginning of this section for general management prescriptions by forest type. The General Management Prescriptions apply and all management activities are authorized, except as noted below for this management area. The richer soils and northern hardwood component make this area different than most of the rest of the NH-AL.

- Clearcut harvest aspen maintaining the current mosaic of size and age class within the aspen forest type, and retain groups or individuals of northern hardwoods, pine, spruce, or oak to promote a mix of tree species on these sandy soils.

This Management Area may contain designated Wilderness Lakes, Wild Lakes, and Scenic Lakes. The land management surrounding these lakes must be consistent with the management objectives and prescriptions for the respective lake designation. The list and map of Wilderness, Wild, and Scenic lakes as well at their objectives and prescriptions can be found in the Lake Management Zone section.

Forest Production Management Areas   AREA 1

WINEGAR MORAINES

Table 2.1. Area 1 – Winegar Moraines, Current and desired future conditions for community types in acres and percent of total.

Community Type	Current		Predicted 50-year Condition*	
	Acres	% of Total Area	Acres	% of Total Acres
Aspen	2,259	46%	2,209	45%
Grass openings	57	1%	57	1%
Forested wetlands	623	13%	623	13%
Hemlock Hardwood	75	1%	75	2%
Northern hardwoods	1,175	24%	1,348	27%
Red & White pine	93	2%	100	2%
Fir-Spruce	92	2%	42	1%
Unforested wetlands	264	5%	264	5%
White birch	280	6%	200	4%
TOTAL	**4,918**	**100%**	**4,918**	**100%**

Northern hardwood community type increased due to decrease in aspen, white birch, and fir-spruce community types

* Predicted 50-year Condition is an estimate of the forest covertype in 50 years and does not necessarily reflect the long-term objectives of the Area.

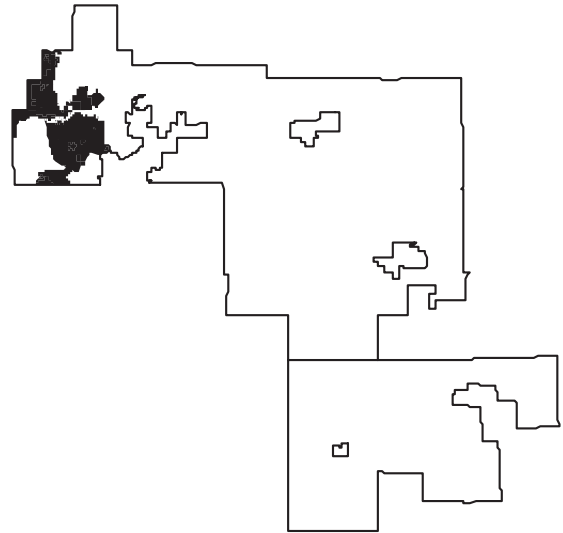## Forest Production Management Classification

MANITOWISH PEATLANDS

This 15,000 acre area is part of one of Wisconsin's largest peatlands, and covers a significant portion of the Manitowish – Turtle – Flambeau river watershed. The topography is nearly level throughout. Soils are mostly very poorly drained organic peat.

This area is a complex, diverse mosaic of different tree species and communities, and the lowlands are very much the way they were before European settlement. The area's vegetation is characterized by large expanses of lowland communities, including open bog, poor fen, black spruce, swamp hardwoods and tamarack. Many of the lowland areas contain sandy "islands" that are forested mainly with scattered red, white and jack pine. Some areas have sandy and loamy sand soils. Unforested wetlands dominate approximately half of the area. Forested wetlands, the majority of which are unmerchantable tamarack and black spruce, are scattered across the landscape. Aspen, white birch, red pine and white pine are found in significant amounts on the uplands. There are also areas of northern hardwoods and hemlock-hardwoods. Most stands are a mixed mosaic of tree species.

At European settlement, the vast majority of the area was dominated by swamp conifers and open wetlands, with the northern portion of uplands associated with hemlock, white birch, and white pine, while the southern areas had more red pine, white pine, and aspen. Within the forested wetlands, tamarack was predominant, with black spruce, swamp hardwoods and white cedar forest also present in significant numbers. Historically, fire was a significant disturbance factor within this area, as it was in almost every area on the NH-AL. In addition to fire, windthrow was and continues to be a major influence due to the shallow roots of trees associated with high water tables.

AREA 2 SUMMARY

- ▲ This area is approximately 14,966 acres in size with 12,220 acres in state ownership.
- ▲ Opportunity to maintain the high quality open sedge meadow, bog, shrub and forested wetland system for ecological, water quality and habitat values.
- ▲ Conservation of wetland habitat for many rare species.
- ▲ Management for "islands" of mature pine and hemlock within a complex mosaic of wetland communities.

AREA 2 LOCATOR MAP

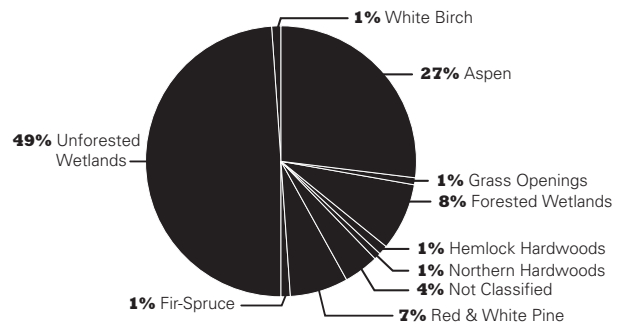## Forest Production Management Classification

MANITOWISH PEATLANDS

Map 3. Area 2 - Manitowish Peatlands

Forest Production Management Classification

Legend:
- State Forest Project Boundary
- Area 2. Manitowish Peatlands — Forest Production Management
- Other State Forest Management Areas
- Private Land within State Forest Project Boundary
- Land outside State Forest Project Boundary
- Open Water

Cedar Lake
North Bass Lake
(Wild Lakes)
Norway Pine Lake
DuPage Lake
Woodson Lake
South Bass Lake
Brush Lake
(Wilderness Lakes)
Kelly Lake
Plunkett Lake
Circle Lily Lake
Toy Lake
(Wilderness Lake)
Manitowish River
Frog Lake
(Wild Lakes)
(Wild Lake)
Sandy Beach Lake
Mud Lake
Powell Marsh State Wildlife Area
VILAS CO. IRON CO.
State Forest Project Boundary

Northern Highland - American Legion State Forest
Master Plan

NHAL096-2

Scale 1:90,000

0   0.5   1   1.5   Miles

The data shown on this map have been obtained from various sources, and are of varying age, reliability and resolution. This map is not an authoritative source of information about legal land ownership or public access.

March 8, 2005

AREA 2

Forest Production Management Classification

MANITOWISH PEATLANDS

LONG-TERM OBJECTIVES (100 YEARS)

- Maintain the high quality open sedge meadow/bog, shrub and forested wetland system primarily for ecological, water quality and habitat values.
- Maintain a diversity of forested and unforested wetlands. The small patches of existing old growth pine and hemlock-hardwoods would be maintained, and expanded where possible.
- A larger portion of the upland area would maintain a variety of successional forest types and stages. Early successional types (aspen, white birch and fir) would be managed at economic age maturity. Later successional stages of long-lived trees (hemlock hardwoods, northern hardwoods, and red and white pine) would be managed to their biological mature ages (Eckstein, 2001).

SHORT-TERM OBJECTIVES (50 YEARS)

- Encourage forest management practices and the production of forest products that sustainably meet the needs of current generations while providing adequate resources to meet the needs of the future.
- Maintain red and white pine communities where possible. There are many small scattered stands existing as islands in wetland communities that are challenges to access. Plantations will be managed at biological maturity and replanted back to pines.
- Increase acres of Northern Hardwood stands with management as mixed stands of white birch and 'not classified' acreages are harvested. Most Hemlock-Hardwood stands will not be managed or will use special techniques to attempt hemlock regeneration.
- Maintain a aspen stands using General Management Prescriptions.
- Unforested-Wetland community's long-term objectives would be met through passive management in most areas.
- Regenerate black spruce and tamarack stands through active management.
- Access across some wetland areas in a frozen ground condition may be required in certain circumstances.

AREA 2 CURRENT LAND COVER

- **1%** White Birch
- **27%** Aspen
- **49%** Unforested Wetlands
- **1%** Grass Openings
- **8%** Forested Wetlands
- **1%** Hemlock Hardwoods
- **1%** Northern Hardwoods
- **4%** Not Classified
- **1%** Fir-Spruce
- **7%** Red & White Pine

RESOURCE MANAGEMENT PRESCRIPTIONS

Please see the General Management Prescriptions at the beginning of this section for information on general management prescriptions by forest type. The General Management Prescriptions apply and all management activities are authorized, except as noted below for this management area.

- Establish dead tree snags of early successional species and course woody habitat by leaving selected aspen, white birch, balsam fir and red maple trees in harvest areas.
- Some of the wetland areas in this management unit will be passively managed and some will be actively managed. Place heavy emphasis on protection of the streams, waterways and watersheds in this area. Temporary road access across some of these wetlands may be required. To protect wetlands during timber harvests, temporary road access across wetland areas would only be allowed when there are frozen ground conditions.

This Management Area may contain designated Wilderness Lakes, Wild Lakes, and Scenic Lakes. The land management surrounding these lakes must be consistent with the management objectives and prescriptions for the respective lake designation. The list and map of Wilderness, Wild, and Scenic lakes as well at their objectives and prescriptions can be found in the Lake Management Zone section.

Table 2.2 Area 2 – Manitowish Peatlands, Current and desired future conditions for community types in acres and percent of total.

Community Type	Current		Predicted 50-year Condition*	
	Acres	**% of Total Area**	**Acres**	**% of Total Acres**
Aspen	3,350	27%	3,317	27%
Grass openings	108	1%	108	1%
Forested wetlands	1,008	8%	1,008	8%
Hemlock Hardwood	105	1%	105	1%
Northern hardwoods	90	1%	190	2%
Not Classified	452	4%	212	2%
Red & White pine	886	7%	886	7%
Fir-Spruce	180	1%	180	1%
Unforested wetlands	5,914	49%	6,114	50%
White birch	127	1%	100	1%
TOTAL	**12,220**	**100%**	**12,220**	**100%**

Future acres of unforested-wetlands increased from the Not Classified category being re-classified to unforested wetlands

* Predicted 50-year Condition is an estimate of the forest covertype in 50 years and does not necessarily reflect the long-term objectives of the Area.

AREA 3

Forest Production Management Classification

VILAS SANDY PLAINS NORTH

The rolling pitted outwash topography, sandy soils, and abundant lakes in this large area represent the most common landscape features of the NH-AL. This area, along with Areas 4 and 6, makes up the Vilas-Oneida Sandy Plains ecological landscape. Area 3 has 62,600 acres of state-owned land.

Currently, aspen dominates many areas, with red oak, white birch, red pine, and jack pine existing in significant amounts. The landscape is a forest of various covertypes with large and small patches of different dominant tree species. Even though forest stands are labeled according to the dominant tree species, most forest stands here are highly diverse. For example, white pine is present in most aspen stands as scattered large trees and understory seedlings or saplings. Common understory plants include shrubs such as hazelnut, juneberry, low sweet blueberry, sweetfern, and maple-leaf viburnum, and herbs such as wild lily-of-the-valley, bracken fern, grasses and sedges, and big leaf aster. As is common across the NH-AL, unforested wetlands, lakes and streams are found throughout the area. Most of the rare and listed species found on the NH-AL inhabit these wetland and aquatic habitats.

At European settlement, this area was mostly covered with white and red pine. White birch and aspen were found as secondary components, with some patches of jack pine and northern hardwoods. This historically fire influenced mixed forest was composed of many stands 50-200 years old with some trees surviving as old as 300 years. Within forested wetlands, tamarack was the dominant species with black spruce commonly found throughout. Hemlock and white pine were minor components in forested wetlands.

Note: The Partridge and Frank Lake Wild Areas (1982 Plan) located in this Area are redesignated as Semi-Remote Areas to follow the new master planning code requirements and to better describe the recreational experience and management practices found in these areas. Please refer to the Semi-Remote description in the Recreation Section of this document for more details.

AREA 3 SUMMARY

- ⏶ This area is approximately 100,985 acres in size with 62,600 acres in state ownership.
- ⏶ Characteristic sandy, pitted outwash topography.
- ⏶ Increase red and white pine as a dominant community in some areas and as a greater component in other areas over the long term.
- ⏶ Maintain aspen as a strong component in mixed stands across the landscape and as the dominant of more diverse stands.
- ⏶ Maintain a diversity of habitat conditions to support harvestable populations of the major forest game species including white-tailed deer, black bear, ruffed grouse, American woodcock, and snowshoe hare.
- ⏶ Conservation of forested and unforested wetlands that provide habitat for many rare species and help protect water quality.

AREA 3 LOCATOR MAP
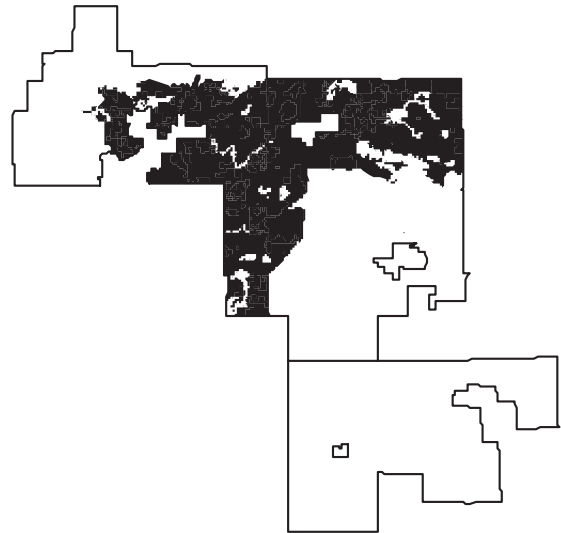
Forest Production Management Classification

VILAS SANDY PLAINS NORTH

AREA 3

Forest Production Management Classification

Map 4.   Area 3 - Vilas Sandy Plain North
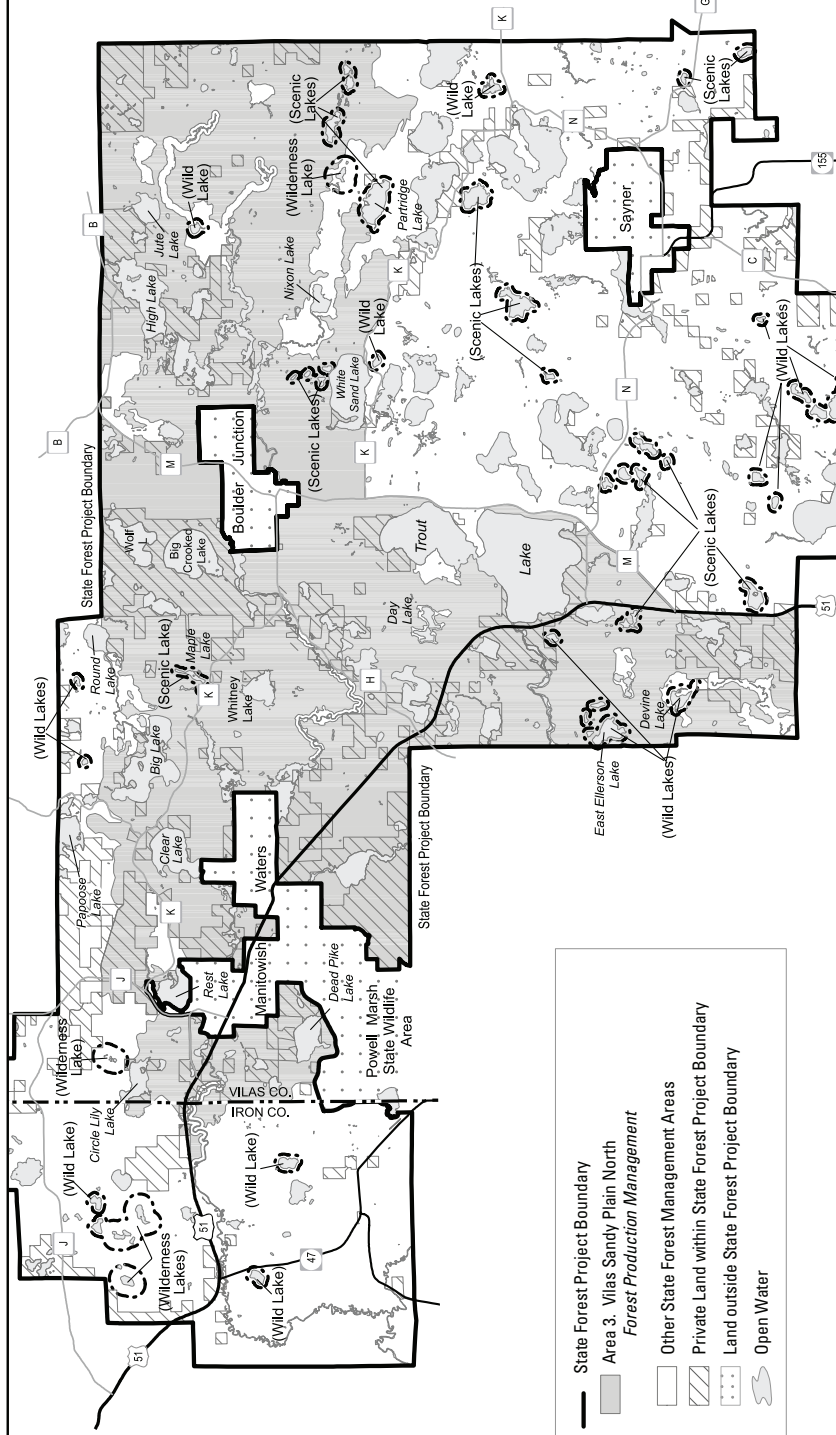
N

July 6, 2005

The data shown on this map have been obtained from various sources, and are of varying age, reliability and resolution. This map is not an authoritative source of information about legal land ownership or public access.

Scale 1:220,000

0   2   4   6   Miles

Legend:

State Forest Project Boundary

Area 3. Vilas Sandy Plain North
Forest Production Management

Other State Forest Management Areas

Private Land within State Forest Project Boundary

Land outside State Forest Project Boundary

Open Water

Northern Highland - American Legion State Forest

Master Plan

NHAL096-3

Forest Production Management Classification

VILAS SANDY PLAINS NORTH

LONG-TERM OBJECTIVES
(100 YEARS)

- Increase red and white pine as a dominant community type in some stands and as a greater component in others.
- Maintain aspen as a strong component in mixed stands across the landscape and as the dominant component of more diverse stands.
- Develop a primarily mixed forest with areas dominated by older red and white pine (150-250 years old) with aspen, white birch, jack pine, and older red oak as important secondary species. Other areas will continue to be dominated by aspen but with greater stand diversity and older pines than exist today.
- Maintain a diversity of habitat conditions to support harvestable populations of the major forest game species including white-tailed deer, black bear, ruffed grouse, American woodcock, and snowshoe hare.
- Increase the availability of habitat for non-game species which use pine forests such as evening grosbeak, pine siskin, red crossbill and pine warbler.
- Maintain a diversity of forested and unforested wetlands.
- Protect and maintain the water quality and riparian habitat on lakes and streams.

SHORT-TERM OBJECTIVES
(50 YEARS)

- Increase the presence and age of red and white pine on suitable sites across the area. Specifically, increase the acreage of stands that are dominated by red/white pine and, in mixed forest stands where red and white pine are not the dominant species, increase the average pine component.
- Maintain aspen as a strong component in mixed stands across the landscape but reduce the number of aspen dominated stands as the red/white pine increase. Manage for a variety of stand sizes and species mixtures.
- Manage for current levels of red oak, assuring natural regeneration through harvest and site disturbance and increasing the average age of this type.
- Manage for current levels of white birch, jack pine, fir-spruce and northern hardwoods.
- Maintain forested wetlands with a representation of multiple age classes of black spruce and tamarack applying General Management Prescriptions.
- Maintain current levels of natural and artificial grass openings for wildlife.

AREA 3 CURRENT LAND COVER

9% Unforested Wetlands
1% Fir-Spruce
7% Red Oak
16% Red & White Pine
2% Not Classified
2% Northern Hardwoods
5% Jack Pine
1% Hemlock Hardwoods
5% White Birch
43% Aspen
3% Grass Openings
6% Forested Wetlands

RESOURCE MANAGEMENT PRESCRIPTIONS

Management actions in this area follow the General Management Prescriptions, as described in the beginning of the Land Management section and all management activities are authorized.

This Management Area may contain designated Wilderness Lakes, Wild Lakes, and Scenic Lakes. The land management surrounding these lakes must be consistent with the management objectives and prescriptions for the respective lake designation. The list and map of Wilderness, Wild, and Scenic lakes as well at their objectives and prescriptions can be found in the Lake Management Zone section.

- Lake Trout Lake, Little Rock, and Sparkling Lakes are designated as experimental lakes as per Administrative Code NR 20.41. All management activities should consider the long and short term impacts to the research lake.

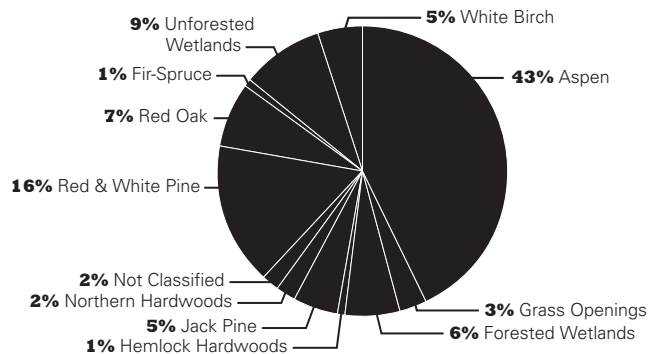## Forest Production Management Classification

AREA **3**

VILAS SANDY PLAINS NORTH

Table 2.3 Area 3 - Vilas Sandy Plains North, Current and desired future conditions for community types in acres and percent of total

Community Type	Current		Predicted 50-year Condition*	
	Acres	% of Total Area	Acres	% of Total Area
Aspen	27,052	43%	25,040	40%
Grass Openings	1,513	3%	626	1%
Forested Wetlands	4,056	6%	4,056	6%
Hemlock Hardwoods	113	1%	113	1%
Jack Pine	3,357	5%	3,900	6%
Northern Hardwoods	1,465	2%	1,500	2%
Not Classified	1,483	2%	400	1%
Red and White Pine	10,058	16%	12,520	20%
Red Oak	4,083	7%	4,000	6%
Fir-Spruce	474	1%	400	1%
Unforested Wetlands	5,876	9%	7,025	11%
White Birch	3,070	5%	3,020	5%
TOTAL	**62,600**	**100.00%**	**62,600**	**100.00%**

Future unforested wetlands increased from acres manually reclassified in the Not Classified category.

* Predicted 50-year Condition is an estimate of the forest covertype in 50 years and does not necessarily reflect the long-term objectives of the Area.

Forest Production Management Classification

VILAS SANDY PLAINS CENTRAL

This Area, with its pitted outwash topography of predominately rolling, well-drained sandy soils, and abundant lakes, represents the most common characteristics of the NH-AL. Area 4 has 27,351 of its 37,226 acres in state ownership. Glaciers helped shape the landscape, forming many ridges and lakes, and depositing sand and gravel outwash. This area, along with Areas 3 and 6, makes up the Vilas-Oneida Sandy Plains ecological landscape.
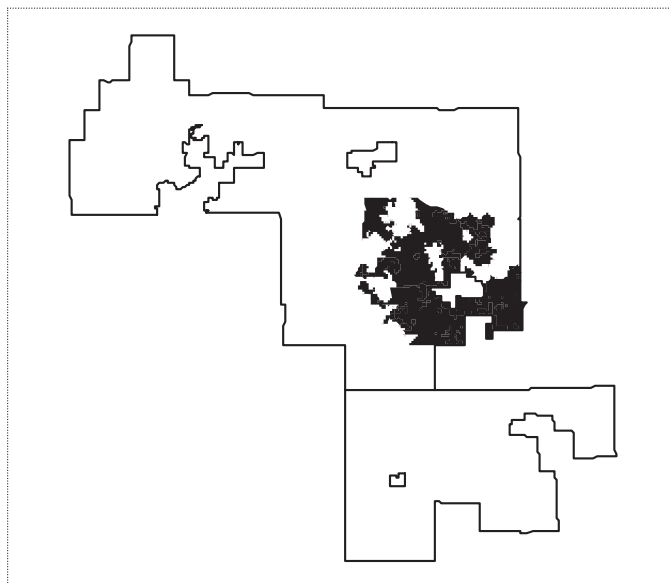
At European settlement, this area was mostly covered with white and red pine. White birch and aspen were found secondarily across the area with patches of jack pine and northern hardwoods. Within forested wetlands, tamarack was predominate, black spruce was common, and hemlock was a minor species. Historically, fire was a significant disturbance factor in this Area. Stand-replacing fires had cycles of every 50-200 years, but some trees survived over 300 years. Some fires burned the understory without killing the pine trees, creating a more open forest. Today, aspen dominates many areas, with red oak, white birch, red pine, and jack pine found in significant amounts, as well. Red oak is more common here than in any other management area. The small percentage of northern hardwood represents a mixed stand type with common species of white birch, red maple, aspen, red oak, white pine and some sugar maple. Most are even aged. White pine exists in most stands of aspen as scattered large trees and understory seedlings or saplings.

The habitat types common in this area are typically characterized by an understory of shrubs such as hazelnut, juneberry, low sweet blueberry, sweetfern, and maple-leaf viburnum, and herbs such as wild lily-of-the-valley, bracken fern, grasses and sedges, and big leaf aster. Unforested wetlands are found throughout the area, and provide habitat for many rare species.

Note: The Partridge and Frank Lake Wild Areas (1982 Plan) located in this Area are re-designated as Semi-Remote Areas to follow the new master planning code requirements and to better describe the recreational experience and management practices found in these areas. Please refer to the Semi-Remote description in the Recreation Section of this document for more details.

AREA 4 SUMMARY

- ▲ This area is approximately 37,226 acres in size with 27,351 acres in state ownership.
- ▲ Characteristic sandy, pitted outwash soils and rolling topography.
- ▲ Opportunity to begin restoration of white and red pine communities.
- ▲ Opportunity to manage for mixed forests of pines, oaks, aspens, and birches.
- ▲ Opportunity to maintain and enhance significant red oak forests.
- ▲ Conservation of forested and unforested wetlands that provide habitat for many rare species and help protect water quality.

AREA 4 LOCATOR MAP

Forest Production Management Classification
VILAS SANDY PLAINS CENTRAL

Forest Production Management Classification

Map 5. Area 4 - Vilas Sand y Plain Central

Legend:
- State Forest Project Boundary
- Area 4. Vilas Sandy Plain Central *Forest Production Management*
- Rustic Road - Hwy K
- Other State Forest Management Areas
- Private Land within State Forest Project Boundary
- Land outside State Forest Project Boundary
- Open Water

Boulder Junction

(Scenic Lakes)

White Sand Lake

(Wild Lake)

(Scenic Lake)

Partridge Lake

Escanaba Lake

Ballard Lake

Irving Lake

Laura Lake

Trout

(Scenic Lakes)

Lone Tree Lake

(Wild Lake)

Lake Salsich

Lake

Allequash Lake

Star

Frank Lake

Razorback Lake

Lake

Muskellunge Lake

Crystal Lake

Sayner

Stella Lake

Deadman Lake

(Scenic Lakes)

(Scenic Lakes)

Shannon Lake

(Wild Lakes)

(Wild Lake)

Little Cloud Lake

Big Arbor Vitae Lake

(Scenic Lake)

(Wild Lakes)

VILAS CO.
ONEIDA CO.

State Forest Project Boundary

Northern Highland - American Legion State Forest
Master Plan
NHAL096-4

0   0.5   1   1.5   2   Miles
Scale 1:120,000

The data shown on this map have been obtained from various sources, and are of varying age, reliability and resolution. This map is not an authoritative source of information about legal land ownership or public access.
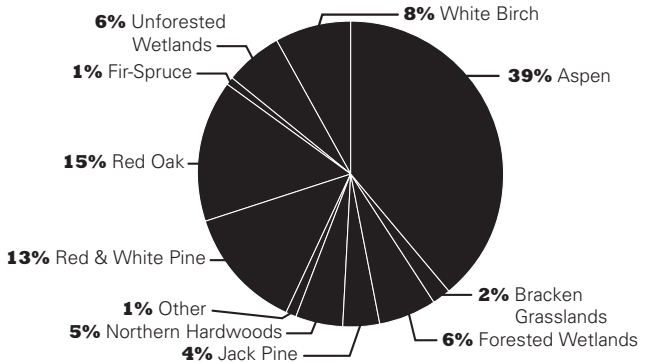
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July 8, 2005

AREA 4

Forest Production Management Classification

VILAS SANDY PLAINS CENTRAL

LONG-TERM OBJECTIVE (100 YEARS)

- Develop, increase and maintain a mixed forest domi-nated by older red and white pine with aspen, red oak, white birch, and jack pine as important secondary species. Areas with slightly richer soil would be managed for red oak with red and white pine.
- Maintain a diversity of forested and unforested wetlands.
- (Harvest would occur when long-lived trees reach biolog-ical maturity.)

SHORT TERM OBJECTIVE (50 YEARS)

- Increase the presence and age of red and white pine on suitable sites across most of the mixed forest as oppor-tunities present. Specifically, increase the acreage of stands that are dominated by red and white pine and, in mixed forest stands where red and white pine are not the dominant species, increase the average pine compo-nent.
- Maintain or increase abundance of red and white pine trees in aspen, red oak, white birch, jack pine and northern hardwood stands.
- Maintain sites with early successional forest types such as aspen, jack pine, and white birch. Although white birch will be decreased by mortality and regeneration challenges. Some white birch stands will be converted to pine plantations.
- Maintain aspen as a dominant community as well as maintain aspen as a secondary component in other stand types. Some of the white birch and fir-spruce types will convert to aspen. Some aspen type will convert to pine types.
- Manage for current levels of red oak, assuring natural regeneration through harvest and site disturbance and increasing the average age of this type in mixed stands.
- Northern hardwood communities will be decreased as these stands are managed for red oak and natural pine regeneration.
- Maintain forested wetlands with a representation of multiple age classes of black spruce and tamarack, applying General Management Prescriptions.
- Grass opening reduction will go to pine plantation or natural regeneration of aspen or white pine.

AREA 4 CURRENT LAND COVER

6% Unforested Wetlands
1% Fir-Spruce
8% White Birch
39% Aspen
15% Red Oak
13% Red & White Pine
1% Other
5% Northern Hardwoods
4% Jack Pine
2% Bracken Grasslands
6% Forested Wetlands

RESOURCE MANAGEMENT PRESCRIPTIONS

Please see General Management Prescriptions in the begin-ning of the Land Management section for information on general management prescriptions by forest type to Pines. All management activities managing this forest type are author-ized.

- Retain long-lived trees to biological maturity

This Management Area may contain designated Wilderness Lakes, Wild Lakes, and Scenic Lakes. The land management surrounding these lakes must be consistent with the manage-ment objectives and prescriptions for the respective lake designation. The list and map of Wilderness, Wild, and Scenic lakes as well at their objectives and prescriptions can be found in the Lake Management Zone section.

- Forestry staff will work cooperatively with volunteers to develop erosion control measures at Musky Mountain. Erosion control activities may include tree planting, seeding, and gating of area.

Forest Production Management Classification

VILAS SANDY PLAINS CENTRAL

AREA **4**

Table 2.4 Area 4 – Vilas Sandy plains Central, Current and desired future conditions for community types in acres and percent of total.

Community Type	Current		Predicted 50-year Condition*	
	Acres	% of Total Area	Acres	% of Total Area
Aspen	10,390	39%	10,390	38%
Grass Openings	650	2%	275	1%
Forested Wetlands	1,646	6%	1,646	6%
Jack pine	1,040	4%	1,090	4%
Northern Hardwoods	1,460	5%	1,000	4%
Not Classified	283	1%	183	1%
Red and White Pine	3,591	13%	4,746	17%
Red Oak	4,172	15%	4,172	15%
Fir-Spruce	256	1%	206	1%
Unforested Wetlands	1,643	6%	1,643	6%
White Birch	2,220	8%	2,000	7%
TOTAL	**27,351**	**100.00%**	**27,351**	**100.00%**

Not Classified category decreased in the "future" due to manually reclassifying the community types to Pines.

* Predicted 50-year Condition is an estimate of the forest covertype in 50 years and does not necessarily reflect the long-term objectives of the Area.

AREA 5

Forest Production Management Classification
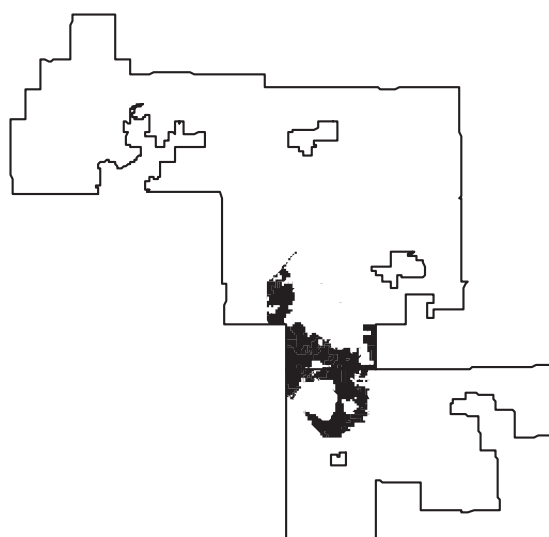## BIG ARBOR VITAE LOAMY HILLS

This area represents 11,523 acres of state owned land with varied topography and an assortment of different forest types. At a large scale, this is one of the more ecologically intact forested portions of the NH-AL. Lakes are common but lowlands, while certainly present, are not as widespread as in other areas on the NH-AL.

Area 5 is characterized by a mix of tree species with aspen, white and red pines, northern hardwoods, white birch, and red oak dominant on the uplands. Tree composition is slowly being replaced by white pine, balsam fir and red maple over time. There are some areas of mature red and white pine also, and these are found extensively throughout the area as important secondary species. The sandy soils and habitat types common to the area support this mixture of tree species in a variety of ages and sizes. The common habitat types here are typically characterized by a moderately developed shrub layer of hazelnut, low sweet blueberry, juneberry, and maple-leaf viburnum, and herbs such as wild lily-of-the-valley, bracken fern, grasses and sedges, and big leaf aster.

At European settlement, the upland areas contained several different forest types including white and red pine, northern hardwoods, hemlock-hardwoods, and even some jack pine/scrub oak. White birch, red maple, aspen and oak were found secondarily across the region. Red and sugar maple are successfully competing on the landscape because of their shade tolerance and lack of fire to control these species. Within the forested wetlands, tamarack and black spruce were predominant, with some scattered cedar. Historically, fire was a significant disturbance factor as it was in almost all areas. Wind throw was and is another important disturbance factor, especially in areas with wetter soils. Sporadic wind events also occurred on drier upland sites and played a vital role in shaping forest succession.

AREA 5 SUMMARY

- ▲ This area is approximately 18,309 acres in size with 11,523 acres in state ownership.
- ▲ Mixed forest on sandy-loamy soils including aspen, pines, hardwoods, and red oak.
- ▲ Opportunity to restore a large scale, older aged mixed red and white pine, red oak, and hardwoods forest in this central area.
- ▲ Opportunity for large-scale forest community connectivity.
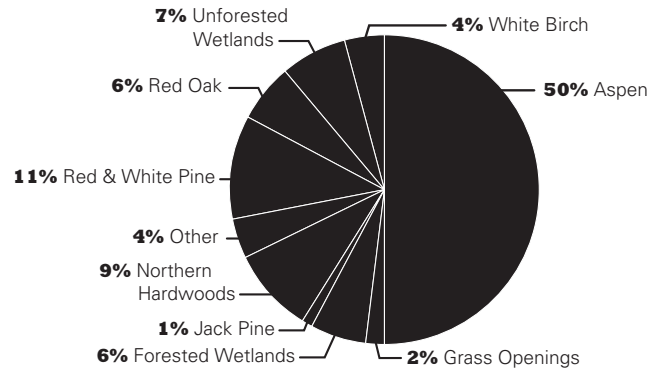- ▲ Management for early successional forest types.

AREA 5 LOCATOR MAP

Map 6. Area 5 - Big Arbor Vitae Hills

Forest Production Management Classification

Legend

— State Forest Project Boundary

▨ Area 5. Big Arbor Vitae Loamy Hills
   Forest Production Management

□ Other State Forest Management Areas

▨ Private Land within State Forest Project Boundary

⋯ Land outside State Forest Project Boundary

Open Water

(Scenic Lake)
Mann Lake
(Scenic Lakes)
Vander Cook Lake
Trilby Lake
(Scenic Lake)
(Wild Lakes)
(Wild Lakes)
Big Arbor Vitae Lake
(Scenic Lake)
Mielke Lake
Little Arbor Vitae Lake
Woodruff
VILAS CO.
ONEIDA CO.
Madeline
Carrol Lake
(Scenic Lake)
Hemlock Lake
Inkpot Lake
Clear Lake
(Scenic Lake)
Sweeney Lake
Rainbow
(Wild Lake)
Little Bass Lake
Flowage
State Forest Project Boundary
Lake Tomahawk
Unnamed (aka Long L)
Hasbrook L
Zotte Lake
(Scenic Lakes)
Tomahawk

Northern Highland - American Legion
State Forest
Master Plan

NHAL096-5

0   0.5   1   1.5   2   Miles
Scale 1:100,000

The data shown on this map have been obtained from various sources, and are of varying age, reliability and resolution. This map is not an authoritative source of information about legal land ownership or public access.

N

Feb. 25, 2005

AREA
5

Forest Production Management Classification

BIG ARBOR VITAE LOAMY HILLS

LONG-TERM OBJECTIVES (100 YEARS)

- Maintain a mixed forest dominated by older red and white pine and (northern hardwoods) with aspen, red oak, white birch, and jack pine as important secondary species.
- Large-scale ecosystem management with increased forest block size, stand age, and conifer component that enhances the ecological characteristics of this area.
- Maintain a diversity of forested and unforested wetlands.
- Maintain and expand the white birch and red oak type.
- Maintain early successional forest types.
- Manage small scattered old growth stands.

SHORT-TERM OBJECTIVES (50 YEARS)

- Increase the presence and age of red and white pine on suitable sites across the area. Specifically, increase the acreage of stands that are dominated by red/white pine and, in mixed forest stands where red and white pines are not the dominant species, increase the average pine component.
- Retain and increase pine components on aspen, red oak, white birch and northern hardwood stands as secondary objectives to their active management.
- Maintain aspen as a strong component across the landscape. Manage for a variety of stand sizes and ages. Look for opportunities to manage for larger stand sizes. Aspen would see gains from managing white birch stands and grassy openings filling in naturally.
- Maintain and increase the red oak component of this area. Increase oak components in management of all stands and assure natural regeneration through harvest and site disturbance.
- Maintain current levels of jack pine with active management activities.
- Maintain forested wetlands with a representation of multiple age classes of black spruce and tamarack applying General Management Prescriptions.

AREA 5 CURRENT LAND COVER

7% Unforested Wetlands
4% White Birch
6% Red Oak
50% Aspen
11% Red & White Pine
4% Other
9% Northern Hardwoods
1% Jack Pine
6% Forested Wetlands
2% Grass Openings

RESOURCE MANAGEMENT PRESCRIPTIONS

The General Management Prescriptions for each appropriate forest type, found at the beginning of the Land Management section, apply to this management area. All management activities appropriate for the forest type are authorized.

This Management Area may contain designated Wilderness Lakes, Wild Lakes, and Scenic Lakes. The land management surrounding these lakes must be consistent with the management objectives and prescriptions for the respective lake designation. The list and map of Wilderness, Wild, and Scenic lakes as well at their objectives and prescriptions can be found in the Lake Management Zone section.

Forest Production Management Classification

BIG ARBOR VITAE LOAMY HILLS

AREA 5

Table 2.5 Area 5 – Big Arbor Vitae Loamy Hills, Current and desired future conditions for community types in acres and percent of total.

Community Type	Current		Predicted 50-year Condition*	
	Acres	Percent of Total Area	Acres	Percent of Total Area
Aspen	5,844	50%	5,905	51%
Grass openings	218	2%	118	1%
Forested wetlands	641	6%	641	6%
Jack pine	160	1%	160	1%
Northern hardwoods	1,038	9%	1,000	9%
Not Classified	432	4%	232	2%
Red & White pine	1,357	11%	1,557	13%
Red oak	635	6%	735	6%
Unforested wetlands	775	7%	775	7%
White birch	423	4%	400	4%
TOTAL	**11,523**	**100.00%**	**11,523**	**100.00%**

Not Classified category consists of 300' lakeshore set backs, Current acres reclassified to Northern Hardwoods and Aspen.

Northern Hardwoods community type decrease as these mixed stands convert to pines and oaks.

* Predicted 50-year Condition is an estimate of the forest covertype in 50 years and does not necessarily reflect the long-term objectives of the Area.

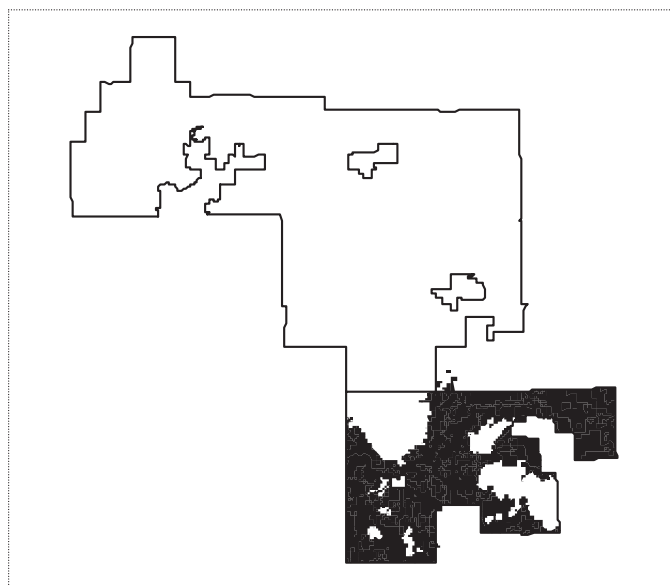# Forest Production Management Classification

ONEIDA SANDY PLAINS

The pitted outwash rolling topography, well-drained sandy soils, and abundant lakes in this 70,169 acre area represent the most common characteristics of the NH-AL. Glaciers helped shape the landscape, forming many ridges and lakes, and depositing sand and gravel outwash. This area, along with Areas 3 and 4, makes up the Vilas-Oneida Sandy Plains ecological landscape. Due to its large size, this area was and continues to be a matrix of different tree species and communities. Part of the formerly designated Indian Creek Wild Area is in this Forest Production Area. This area now will be managed to meet the objectives of Area 6.

At European settlement, this area was mostly covered with white and red pine. White birch and aspen were found secondarily across the area with patches of jack pine and northern hardwoods. Within forested wetlands, tamarack was predominantly, black spruce was common, and hemlock was a minor species. Historically, fire was a significant disturbance factor in this Area. Stand-replacing fires had cycles every 50-200 years, but some trees survived over 300 years. Some fires burned the understory without killing the pine trees, creating a more open forest. Today, aspen dominates a little less than half the area, with red and white pine, red oak, white birch, and jack pine found in significant amounts, as well. White pine exists in most stands of aspen as scattered large trees and understory seedlings or saplings. The habitat types common in this area are typically characterized by an understory of shrubs such as hazelnut, juneberry, low sweet blueberry, sweetfern, and maple-leaf viburnum, and herbs such as wild lily-of-the-valley, bracken fern, grasses and sedges, and big leaf aster. Unforested wetlands and forested wetlands are found throughout the area, and provide habitat for many rare species.

Note: The Partridge and Frank Lake Wild Areas (1982 Plan) located in this Area are re-designated as Semi-Remote Areas to follow the new master planning code requirements and to better describe the recreational experience and management practices found in these areas. Please refer to the Semi-Remote description in the Recreation Section of this document for more details. Indian Creek Wild Area becomes part of Area 4 and part of Area 17.

AREA 6 SUMMARY

- This area is approximately 70,169 acres in size with 32,010 acres in state ownership.
- Characteristic sandy, pitted outwash topography.
- Opportunity to begin restoration of white and red pine communities.
- Opportunity to manage for mixed forests of pines, oaks, aspens, and birches.
- Conservation of forested and unforested wetlands that provide habitat for many rare species and help protect water quality.
- Opportunity to maintain and enhance significant red oak forests.

AREA 6 LOCATOR MAP

Forest Production Management Classification

AREA 6

ONEIDA SANDY PLAINS

Map 7.   Area 6 - Oneida Sandy Plain

Forest Production Management Classification

N

July 6, 2005

Legend

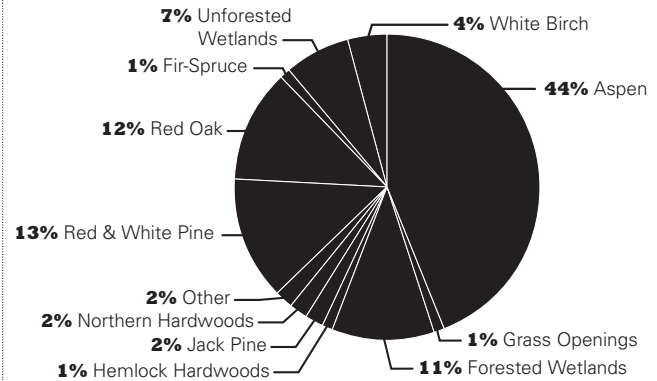State Forest Project Boundary

Area 6. Oneida Sandy Plain
Forest Production Management

Other State Forest Management Areas

Private Land within State Forest Project Boundary

Land outside State Forest Project Boundary

Open Water

The data shown on this map have been obtained from various sources, and are of varying age, reliability and resolution. This map is not an authoritative source of information about legal land ownership or public access.

Scale 1:175,000

0   2   4   6   Miles

Northern Highland - American Legion
State Forest
———— Master Plan

NHAL0966

Kathan L.

Aldridge Lake

Stone Lake

Pickerel Lake

Lynn Lake

(Wilderness Lake)

Spider Lake

Muskellunge Lake

Shallow Lake

North Nokomis Lake

(Wild Lakes)

(Scenic Lake)

Rainbow Flowage

Pickerel Lake

State Forest Project Boundary

VILAS CO.
ONEIDA CO.

Hasbrooke Lake

(Scenic Lakes)

Tomahawk Lake

(Wild Lakes)

McNaughton Lake

(Scenic Lakes)

Clear Lake

(Scenic Lakes)

State Forest Project Boundary

Tomahawk Lake

Bird Lake

Burnham Lake

Woodruff

(Scenic Lake)

(Wild Lake)

Nawaii L.

Tomahawk

70

17

17

70

70

H

51

Forest Production Management Classification

ONEIDA SANDY PLAINS

LONG-TERM OBJECTIVES (100 YEARS)

- Maintain a mixed forest dominated by older red and white pine with aspen, red oak, white birch, and jack pine as important secondary species.
- Maintain a diversity of forested and unforested wetlands.
- Maintain white birch and expand the red oak type.
- Maintain early successional forest types as a strong component of the landscape.
- The age range of major tree species will be up to biological age for longed lived species and economic age on the short-lived species.

SHORT-TERM OBJECTIVES (50 YEARS)

- Increase the presence and age of red and white pine on suitable sites across most of the mixed forest as opportunities present. Specifically, increase the acreage of stands that are dominated by red and white pine and in mixed stands where pines are not the dominant species, increase the average pine component.
- Retain and increase pine components on aspen, red oak, white birch and northern hardwood stands as secondary objectives.
- Maintain aspen component as a dominant community as well as maintain aspen as a secondary component in other stand types. Some aspen will convert to pine types with active management and by forced conversion to pine types.
- Maintain white birch, jack pine, fir-spruce and hemlock-hardwood types.
- Manage for current levels of red oak and look for opportunities to expand the red oak type with active management on suitable soils. Increase red oak component in mixed stands.
- Maintain forested wetlands with a representation of multiple age classes of black spruce and tamarack, applying General Management Prescriptions.

AREA 6 CURRENT LAND COVER

- **7%** Unforested Wetlands
- **1%** Fir-Spruce
- **12%** Red Oak
- **13%** Red & White Pine
- **2%** Other
- **2%** Northern Hardwoods
- **2%** Jack Pine
- **1%** Hemlock Hardwoods
- **4%** White Birch
- **44%** Aspen
- **1%** Grass Openings
- **11%** Forested Wetlands

RESOURCE MANAGEMENT PRESCRIPTIONS

The General Management Prescriptions for each appropriate forest type, found at the beginning of the Land Management section, apply to this management area. All management activities appropriate for the forest type are authorized.

This Management Area may contain designated Wilderness Lakes, Wild Lakes, and Scenic Lakes. The land management surrounding these lakes must be consistent with the management objectives and prescriptions for the respective lake designation. The list and map of Wilderness, Wild, and Scenic lakes as well at their objectives and prescriptions can be found in the Lake Management Zone section.

Table 2.6 Area 6 – Oneida Sandy Plains, Current and desired future conditions for community types in acres and percent of total.

Community Type	Current		Predicted 50-year Condition*	
	Current Acres	Current % Cover	Future Acres	Future % Cover
Aspen	14,557	45%	14457	45%
Grass Openings	363	1%	363	1%
Forested Wetlands	3,432	11%	3,432	11%
Hemlock Hardwoods	176	1%	176	1%
Jack Pine	640	2%	640	2%
Northern Hardwoods	522	2%	542	2%
Not Classified	520	1%	200	0%
Red and White Pine	4,165	13%	4,515	14%
Red Oak	3,966	12%	4,016	12%
Fir-Spruce	289	1%	289	1%
Unforested Wetlands	2,178	7%	2,178	7%
White Birch	1,202	4%	1,202	4%
TOTAL	**32,010**	**100.00%**	**32,010**	**100.00%**

Not Classified category contains forested stands along lakeshores, riverfront, new land acquisitions, and many campground areas. Current acres reclassified to red and white pine and red oak

* Predicted 50-year Condition is an estimate of the forest covertype in 50 years and does not necessarily reflect the long-term objectives of the Area.

Habitat Management Classification

INTRODUCTION

There is one Habitat Management Area located within the NH-AL.

AREA 7: Ruffed Grouse Demonstration Area

The management objective of Habitat Management Areas is to provide or enhance habitat (upland, wetland, or aquatic) to support specific species of plants or animals. Habitats and communities with this designation are managed for a wide variety of purposes, including focused species production and protection (WDNR 2001).

Examples of management activities within the Habitat Management Area, are dependent upon the habitat or species type included. Management could potentially include timber harvesting, herbicide application, mowing, burning, flooding, agricultural cropping, and installation of fish habitat improvement devices, road construction, site prep, planting and erosion control (WDNR 2001).
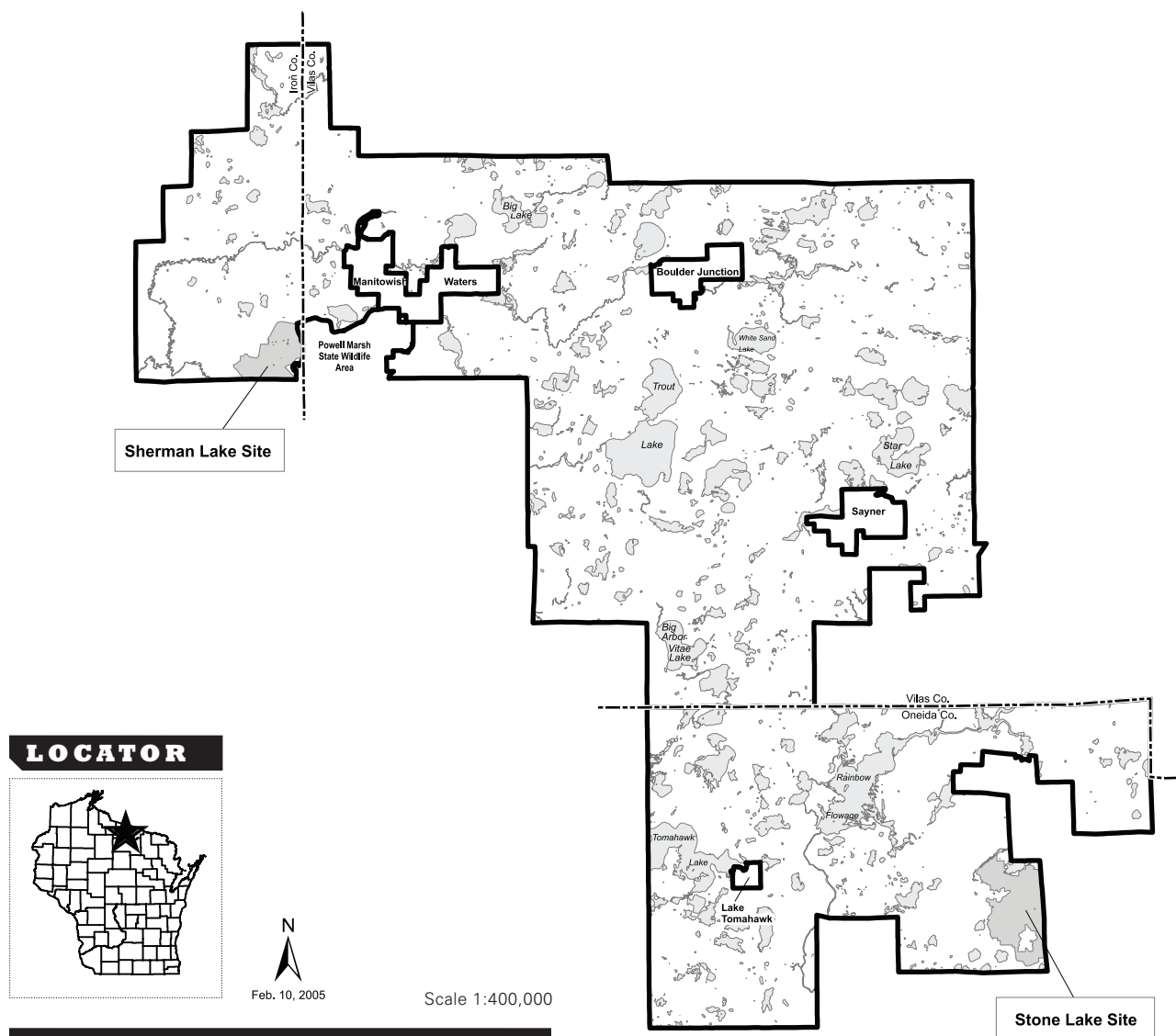
MAP 8: HABITAT MANAGEMENT CLASSIFICATION AREA

Iron Co.
Vilas Co.

Big
Lake

Manitowish   Waters

Boulder Junction

White Sand
Lake

Powell Marsh
State Wildlife
Area

Trout

Sherman Lake Site

Lake

Star
Lake

Sayner

Big
Arbor
Vitae
Lake

Vilas Co.
Oneida Co.

Rainbow

Flowage

Tomahawk

Lake

Lake
Tomahawk

Stone Lake Site

LOCATOR

Feb. 10, 2005

N

Scale 1:400,000

MAP 8 LEGEND

—— State Forest Project Boundary

Habitat Management Classification Areas

☐ Area 7. Ruffed Grouse Demonstation Sites
  Sherman Lake Site
  Stone Lake Site

☐ Other State Forest Management Areas

– · – · – County Boundary

Open Water

The data shown on this map have been obtained from various sources, and are of varying age, reliability and resolution. This map is not an authoritative source of information about legal land ownership or public access.

AREA 7
Habitat Management Classification
### RUFFED GROUSE DEMONSTRATION AREA

SHERMAN LAKE

This 1,942 acre area is predominantly an aspen forest that has been managed for ruffed grouse habitat for over 15 years. Its sandy soils and rolling topography are similar to much of the Vilas-Oneida Sandy Hills. Lowlands are common but lakes are more scattered. The area began to be managed for ruffed grouse habitat in the mid 1980s when Forestry staff planned to reduce the size of individual aspen stands and break up the aspen age classes with multiple harvests.

At European settlement, the upland areas were mostly covered with white and red pine. White birch and aspen occurred secondarily across the region. Historically, fire was the dominant disturbance factor.

Today aspen dominates the area. Common understory plants include shrubs such as hazelnut, juneberry, low sweet blueberry, maple-leaf viburnum and herbs such as wild lily of the valley, bracken fern, grasses and sedges and big leaf aster.

STONE LAKE

This 3,549 acre area includes the eastern portion of the former Indian Creek Wild Area. It is predominantly aspen in the uplands, with considerable lowland. The topography is varied and runs from nearly level in some areas to rolling in others. Lowlands are common but lakes are more scattered. Soils are predominately well-drained sandy loams to excessively drained loamy sands. Organic deposits are also common. This location has been managed in the past as a ruffed grouse habitat experimental area. The focus of the experimental area was to regenerate aspen with various patch clearcuts to maximize the age class distribution and placement of the patches.
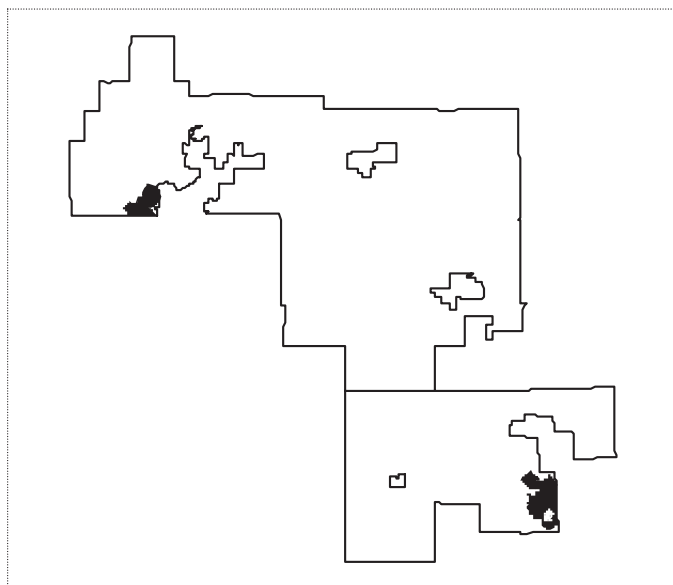
At European settlement, the upland areas primarily supported white and red pine and white birch, aspen, yellow birch, and hemlock were found secondarily. Within the forested wetlands, tamarack, cedar, and black spruce swamp conifer forests were well distributed. Historically, fire was the dominant disturbance factor.

Today, a mixture of aspen in various age classes characterizes the Stone Lake area. Other timber types are present in significant amounts as well, including northern hardwoods, hemlock-hardwoods, some white birch, and forested wetlands. Some very limited areas of mature red and white pine also exist, and these can be found throughout as important secondary species. Common understory plants include shrubs such as hazelnut, juneberry, low sweet blueberry and maple-leaf viburnum and herbs such as wild lily of the valley, bracken fern, grasses and sedges and big leaf aster. There are significant wetlands, both forested and non-forested, and windthrow is a very important disturbance factor given the many wetland high water table sites here. Many ancient tip-up mounds can be observed throughout the area. The Stone Lake area would continue to be managed as a habitat management demonstration area for ruffed grouse and other forest game species.

AREA 7 SUMMARY

Sherman Lake
- ▲ Aspen management for ruffed grouse and other forest game.
- ▲ This area is approximately 1,942 acres in size with 1,852 acres in state ownership.
- ▲ Opportunity to provide a diversity of aspen age classes with scattered red and white pine and red oak trees.

Stone Lake
- ▲ Opportunity to provide a demonstration area for ruffed grouse habitat management.
- ▲ This area is approximately 3,549 acres in size with 3,398 acres in state ownership.
- ▲ Opportunity to provide a diversity of aspen age classes with scattered red and white pine and red oak trees.
- ▲ Conservation of forested and unforested wetlands that provide habitat for many rare species and help protect water quality.
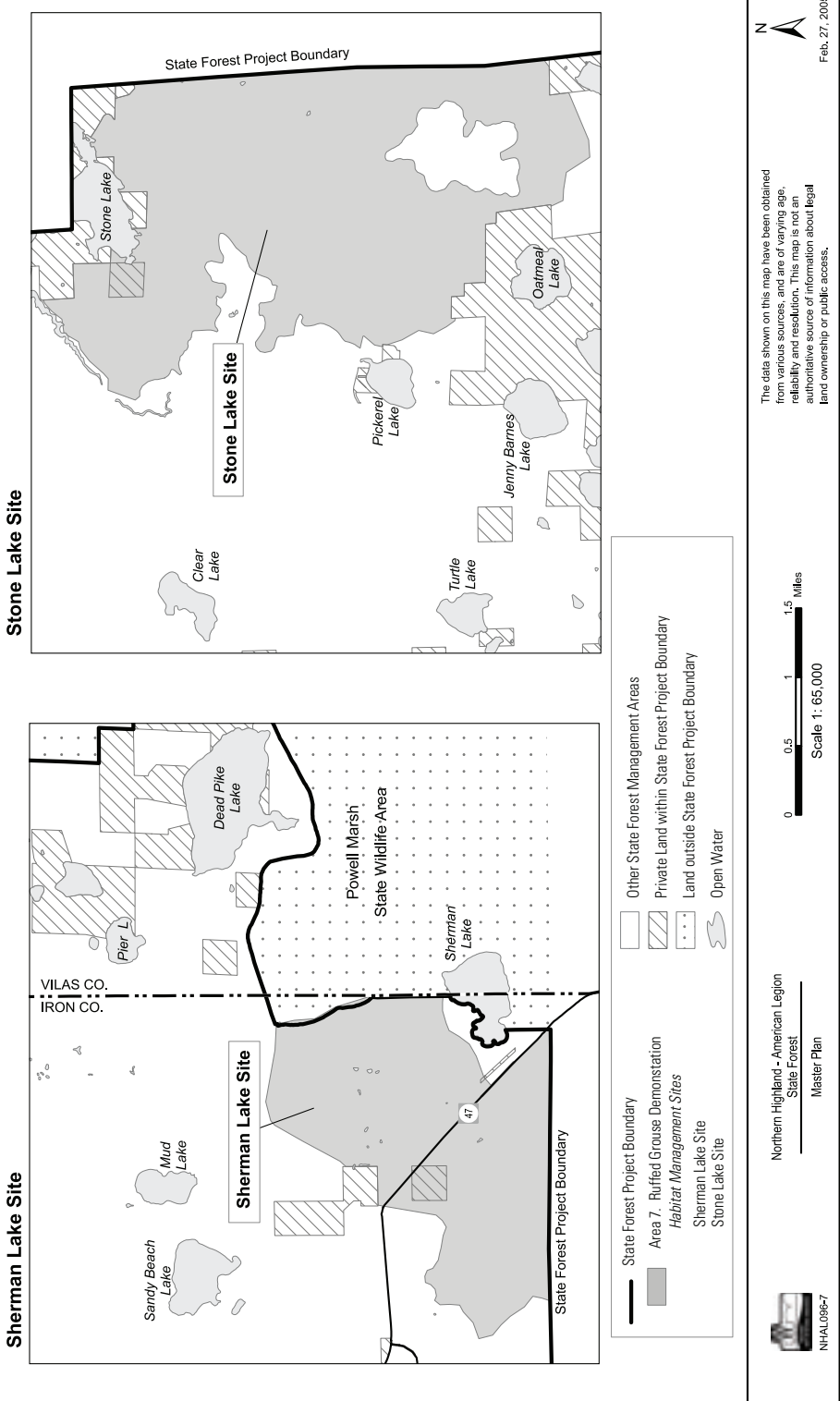
AREA 7 LOCATOR MAP

Habitat Management Classification

RUFFED GROUSE DEMONSTRATION AREA

Habitat Management Classification
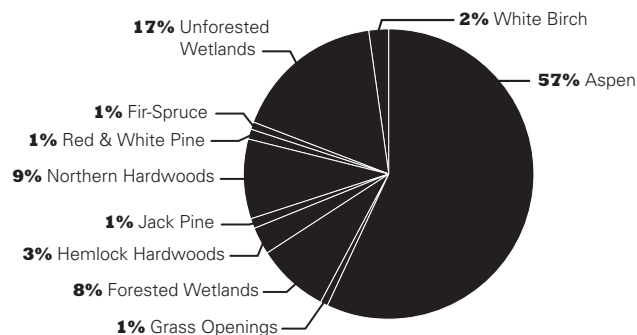
Map 9. Area 7 - Ruffed Grouse Demonstration

Stone Lake Site

Sherman Lake Site

State Forest Project Boundary

Stone Lake

Oatmeal Lake

Pickerel Lake

Stone Lake Site

Jenny Barnes Lake

Clear Lake

Turtle Lake

Dead Pike Lake

Pier L

Powell Marsh State Wildlife Area

Sherman Lake

VILAS CO.
IRON CO.

Sandy Beach Lake

Mud Lake

Sherman Lake Site

47

State Forest Project Boundary

Feb. 27, 2005

N

The data shown on this map have been obtained from various sources, and are of varying age, reliability and resolution. This map is not an authoritative source of information about legal land ownership or public access.

Legend

State Forest Project Boundary

Area 7. Ruffed Grouse Demonstration
Habitat Management Sites
Sherman Lake Site
Stone Lake Site

Other State Forest Management Areas
Private Land within State Forest Project Boundary
Land outside State Forest Project Boundary
Open Water

Northern Highland - American Legion State Forest
Master Plan

NHAL096-7

0   0.5   1   1.5 Miles

Scale 1: 65,000

AREA 7

Habitat Management Classification

RUFFED GROUSE DEMONSTRATION AREA

LONG-TERM MANAGEMENT OBJECTIVES (100 YEARS)

- Maintain it as a ruffed grouse habitat management demonstration area. Aspen would dominate the mixed forest in a variety of age classes and patch sizes. Other associated species would be managed along with the aspen, to the extent that they do not interfere with adequate aspen regeneration.
- Patches of existing mature pine, northern hardwoods, hemlock-hardwoods, white birch and red oak would be maintained or managed for wildlife habitat along with the aspen. Representatives of these types would be present.
- Maintain this area in early successional forest types that benefit wildlife and incorporate research, wildlife education, pulpwood production and provide excellent hunting opportunities. Most trees would reach economic maturity before harvesting for regeneration.

SHORT TERM MANAGEMENT OBJECTIVES (50 YEARS)

- Maintain current aspen dominance for ruffed grouse habitat across most of the mixed forest. Management strategy is to clear-cut aspen stands to regenerate them naturally. Frequent entries would be made to increase the number of age classes and maintain high stem densities needed by game birds.
- Roads, trails and openings would be seeded with clover and grasses.
- All forest covertypes other than aspen will be managed to retain the current acreage. However the age structure of the community types, especially aspen, will change over time.
- Develop research in partnership with other staff or cooperators to document regeneration and development of high quality wildlife habitat.
- Use monitoring information on changes in population from sampling to aid future management decisions.

AREA 7 CURRENT LAND COVER

- **17%** Unforested Wetlands
- **2%** White Birch
- **57%** Aspen
- **1%** Fir-Spruce
- **1%** Red & White Pine
- **9%** Northern Hardwoods
- **1%** Jack Pine
- **3%** Hemlock Hardwoods
- **8%** Forested Wetlands
- **1%** Grass Openings

RESOURCE MANAGEMENT PRESCRIPTIONS

Management within this area emphasizes the development of aspen communities using active techniques, and all appropriate management actions contained within the General Management Prescriptions, found earlier in this section, are authorized. It is recognized that adaptations to manage for Ruffed Grouse habitat will result in high forest product utilization. Some prescription elements unique to this area include:

- Adapt the General Management Prescriptions for each stand to create, enhance and maintain game bird habitat characteristics, including a diversity of tree ages and stand sizes, providing nesting, forage and brooding environments. Age structure for the species would fall into the economic life expectancy consistent with the local site quality.
- Timber harvest to achieve Area goals would use various patch sizes and techniques for regeneration harvests. Techniques may include use of large and small patch clear cuts or group selection, shelterwood harvest, seed tree retention, ground disturbance, seeding or prescribed burning either alone or in combination with the above treatments.
- Red oak and other mast or fruit bearing trees would be mostly retained during harvest operations to favor game food source species and gradually increase their numbers in the forest.

Table 2.7 Area 7 – Ruffed Grouse Demonstration Area, Current and desired future conditions for community types in acres and percent of total.

Community Type	Current		Predicted 50-year Condition*	
	Current Acres	Current % Cover	Future Acres	Future % Cover
Aspen	2,998	57%	2,998	57%
Grass Openings	55	1%	55	1%
Forested Wetlands	460	8%	460	8%
Hemlock Hardwoods	138	3%	138	3%
Jack Pine	47	1%	47	1%
Northern Hardwoods	453	9%	453	9%
Red and White Pine	76	1%	76	1%
Fir-Spruce	37	1%	37	1%
Unforested Wetlands	895	17%	895	17%
White Birch	91	2%	91	2%
TOTAL	**5,250**	**100.00%**	**5,250**	**100.00%**

* Predicted 50-year Condition is an estimate of the forest covertype in 50 years and does not necessarily reflect the long-term objectives of the Area.

This Area may contain Wilderness Lakes, Wild Lakes, and Scenic Lakes. The land management surrounding these Lakes must be consistent with the objectives and prescriptions of not only the Area but the objectives and prescriptions for the Lake designation. The list and map of Wilderness, Wild, and Scenic lakes as well at the objectives and prescriptions can be found in the Lake Management Zone section.